



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,919	04/30/2001	Sadao Nishibori	DED-3170-3	9911

7590 08/10/2006

David E. Dougherty
DENISON, SCHULTZ, DOUGHERTY & MacDonald
1727 King Street, Suite 105
Alexandria, VA 22314

EXAMINER

COLE, ELIZABETH M

ART UNIT	PAPER NUMBER
----------	--------------

1771

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,919

Applicant(s)

NISHIBORI ET AL.

Examiner

Elizabeth M. Cole

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 5, 7, 10, 13, 15, 22, 26, 27, 31, 34, 38, 39, 43, 44, 48-57, 61 and 62 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 7, 10, 13, 15, 22, 26-27, 31, 34, 38-39, 43-44, 48-57, 61-62 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

Art Unit: 1771

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/18/06 has been entered.

2. Claims 1,5,7,10,13,15,22,26-27,31,34,38-39,43-44,48-57,61-62 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not provide support for the limitation that the high density portion has a higher bulk density than said low density portion. The specification at page 9, line 13 provides for particular values of the high density portion which are higher than the low density portion but does not provide support for any value which is higher than the low density portion because that would also encompass density values which are higher than the maximum densities set forth in the specification.

3. Claims 1,5,7,10,13,15,22,26-27,31,34,38-39,43-44,48-57,61-62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly

Art Unit: 1771

point out and distinctly claim the subject matter which applicant regards as the invention. In independent claim 1, the claim recites that resin molded article has a bulk density of 0.001 to 0.08 grams per cc, and further recites that the structure has a low density portion having a bulk density of 0.003 to 0.03 grams per cc and a high density portion having a higher bulk density than said low density portions in a direction of width thereof. The claimed structure is indefinite because it is not clear how, if the minimum density of the low density portion is 0.005 g/cc how the structure can have a bulk density of 0.001 g/cc as set forth in line 3. Further, it is not clear what the values of 0.001 to 0.08 g/cc refers to, is this an average bulk density or is the range over which the low density and high density portions can be found? The claimed structure is not clear because the structure claims a particular bulk density of 0.001 to 0.08 g/cc at line 3 but then further recites that the structure has a low density and high density portion. Also, claims 52-56 fail to further limit the claimed invention since the limitation regarding the ratio of solid filament to hollow filminess is already set forth in claim 1.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1,5,13, 15, 22, 26-27, 31, 34,38-39, 43-44, 48 and 52-57, 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al, U.S. Patent No. 5,972,463 in view of Kargol et al, U.S. patent NO. 5,492,662 for the reasons set forth in paragraph 3 of the previous action. With regard to the particularly claimed density, since Martin et al teaches that the bulk density or void volume can be varied at col. 13, lines 55-63 and Kargol et al teach that the desired density can be obtained by

Art Unit: 1771

adjusting the amount of fibers placed within any given zone of the mold, (col. 2, lines 10-18), altering the density would be a result effective variable that can be adjusted by changing the amount of fiber used in the mold, and therefore, absent any unexpected results, it would have been obvious to one of ordinary skill in the art to have made the nonwoven web having a density within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. With regard to the limitation regarding the hollow filaments, Martin teaches that the web can be made from hollow filaments.

6. Claims 7, 11, 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al in view of Kargol as applied to claims above, and further in view of Insley et al, U.S. Patent No. 5,451,437 as set forth in paragraph 5 of the previous action.

7. Applicant's arguments filed 5/18/06 have been fully considered but they are not persuasive. Applicant argues that the claimed bulk density range is critical because the specification teaches that densities of 0.08 g/cc or greater are unsuitable because at those densities it is impossible to reduce a weight thereof and elasticity thereof is lost. However, the instant claim encompass the value 0.08 so it is not clear that the claimed value is a critical one. Also, as set forth above in the 112 2nd paragraph rejection, the overall structure is not clear, since the values for the bulk density of the structure do not make sense with the claimed low density range set forth in the independent claim.

Finally, since Martin and Kargol are both drawn to cushioning materials and both teach forming low and high density regions, and since both teach various methods of controlling the density, the person of ordinary skill in the art would have been able to select the density of the finished product which produced the desired cushioning, strength, etc., in the finished product.

8. Applicant argues that Kargol does not teach a uniform thickness product.

However, Kargol teaches forming cushions. While the particular cushion of Kargol shown in the figures is shaped to fit an automobile seat, cushions having uniform thickness are well known and completely conventional in the art. For example, sofas and chairs generally have cushions having uniform thickness. Since Kargol teaches forming the varying density regions by employing different amounts of fiber in different regions and not by forming different thickness regions or embossing, the person of ordinary skill in the art would have recognized that any shape of cushion could be formed in the mold of Kargol.

9. Applicant argues that there is not motivation to select the particular proportions of EVA and polyolefin claimed and that the examiner has used improper hindsight in reaching the conclusion of obviousness. However, since the polyolefin is used in Martin as the structural material and the EVA is used as the bonding material, and since Martin wants to make an abrasive structure, it would have been obvious to have employed more of the structural material in order to form a stronger product.

10. Applicant argues that there is nothing to support the assertion that Martin teaches hollow filaments in the claimed amount. However, the embodiment at col. 5 of

Art Unit: 1771

Martin teaches employing hollow fibers which would mean that all the fibers are hollow and thus Martin meets the claimed amount of hollow fibers.

11. With regard to claim 62, Kargol teaches the alternating regions of high and low density.

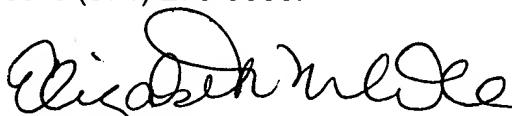
12. With regard to Karami, the rejection has been withdrawn in view of the amendment which limits the fibers to hollow fibers. Karami does not teach hollow fibers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.



Elizabeth M. Cole
Primary Examiner
Art Unit 1771

e.m.c